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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Beatrix Kottwitz

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EXAMINER

MOORE, WILLIAM W

ART UNIT

PAPER NUMBER

1656

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/774,018	<b>Applicant(s)</b> KOTTWITZ ET AL.	
	<b>Examiner</b> William W. Moore	<b>Art Unit</b> 1656	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 December 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 79-97 is/are pending in the application.
- 4a) Of the above claim(s) 80,81,83 and 84 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 79,82 and 85-97 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |  |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____   |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application  |
| Paper No(s)/Mail Date _____  | 6) <input checked="" type="checkbox"/> Other: <u>A two-page Appendix follows the text of the action.</u> |



## DETAILED ACTION

*Response to Amendment*

Applicant's Amendments to the specification and claims in the Response filed 12 December 2007 have been entered. The previous claims 47-78 are cancelled at Applicant's request and Applicant presents the new claims 79-97, the recitations of which avoid the objection of record to the claims which are WITHDRAWN. The objections of record to the specification are likewise WITHDRAWN. The claim amendments clarify descriptions of the intended subject matter thus avoid the rejections of record of claims herein under the first and second paragraphs of 35 U.S.C. § 112 which are WITHDRAWN. New limitations describing the elected subject matter of Group 4 in terms of percentage identity, however, permit the application of several new prior publications as anticipatory disclosures. The new claims 80, 81, 83, and 84 are withdrawn from consideration as drawn to a non-elected invention where the restriction requirement as between the amylase of Group 4 and amylases of Groups 1-3 and 5-30 was made FINAL at page 2 of the action mailed 24 September 2007. A proposed examiner's amendment communicated to Applicant's counsel on 29 February 2008 (i) removed non-elected subject matter, (ii) introduced one of the three limitations now present in the new claim 82 within claim 79 to distinguish the elected subject matter from the prior art, (iii) restated claim 80 to describe elected subject matter and recite another of the three limitations now present in the new claim 82, and (iv) indicated that the specific, closely structurally-related, amylase amino acid sequences set forth in SEQ IDs NOs: 6 and 10 falling within the structural limitation of the restated claim 79 were also free of the prior art. It is provided as an APPENDIX at pages 10 and 11 of this communication.

*Information Disclosure Statement*

Applicant submits four pages of Forms for annotation and acknowledgment of documents listed as part of an Information Disclosure Statement [IDS] filed by mail with the USPTO on 21 June 2004 as evidenced by a return postcard that acknowledges their receipt date-stamped 23 June 2004. **This date of receipt of Applicant's IDS occurred more than three years before the communication of an Office action on the merits in this application.** No fee relating to an IDS has yet been charged and PALM has no IDS entry for this application. No documents, whether foreign patents or non-patent literature publications, cited in the four pages of Forms USPTO-1449 have been scanned into the file for this application, however, thus 150 documents of the 172 cited are not available for consideration. Applicant may verify this through access to the scanned application file in private PAIR. When these 150 documents become available as scanned files, they and the 22 US patents cited will all be considered together.

Art Unit: 1652

**Applicant should not be required pay the fee required by 37 CFR 1.97(c) for filing an IDS after an initial communication on the merits in an application because the evidence shows that the IDS was submitted long before a first communication on the merits was mailed.** Applicant is invited to resubmit the 150 documents, and to include the corresponding Forms USPTO-1449 so that they may be scanned for execution by the examiner in PDF format. The submission should be captioned a "Replacement Information Disclosure Statement", should include the copy of the date-stamped postcard provided in the Response filed 12 December 2007, and should also include a copy of this communication, citing it on the cover page of the submission, to establish that it is **improper** to require the payment of the fee specified by 37 CFR 1.97(c). If a fee is charged despite such a showing, **it is agreed that a Petition by Applicant for refund of the fee required under 37 CFR 1.97(c) should be granted because the need for payment a nyfee is entirely due to an error on the part of the USPTO.**

*Claim Rejections - 35 USC § 112*

The following is a quotation of the second paragraph of 35 U.S.C. § 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 79, 82, and 85-97 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 79 and 95-97 are rejected as indefinite because the recitation of claim 79, from which claims 85-96 depend, as well as the recitation of claim 97 are ambiguous, thus indefinite. in attempting to define amylases intended to differ from both of the starting amylase amino acid sequences intended to contribute to a chimeric amylase from either starting amylase, as well as from other amylases. Claims 79 and 97 suggest that segments of the *B. amyloliquefaciens* amylase amino acid sequence set forth in SEQ ID NO:4 [A], which is 82.9% sequence identical to the *B. licheniformis* amylase amino acid sequence set forth in SEQ ID NO:2 [L] and segments of SEQ ID NO:2 may be interchanged at over 30 positions numbered according to the amino acid sequence of SEQ ID NO:4, i.e., an amino acid segment of one may be substituted for the corresponding amino acid sequence of the other and vice versa. Yet transposition from one to the other of the segments bound by amino acids 17 through 19 numbered according to the amino acid sequence of SEQ ID NO:4 leaves both unchanged, as do transpositions of the segments bound by amino acids 108 through 112, 147 through 149, 147 through 151, 147 through 153, 149 through 151, 149 through 153, 151 through 153, and numerous other transpositions. Moreover, both claims 79 and 97 now recite "95% identity", blurring distinctions between larger segments, providing a greater number of instances where either a sequence

Art Unit: 1652

95% identical to one or the other starting sequence is indistinguishable from the other starting sequence. This degree of ambiguity leaves the artisan and the public seeking to ascertain the metes and bounds of the intended subject matter unable to clearly determine which of the hundreds of potential chimeras are within or without the scope of the claims.

The elected claim 82 is independently rejected as indefinite because it states a broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation in the same claim. This is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claim 82 recites the broad limitation "98%, and then the claim recites, "99%, or 100%", which are both successively narrower statements of the initial range/limitation. In this national forum, the proper format for stating subject matters that differ in scope is the use of successive, dependent, claims that refer back to a claim of broader scope.

#### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 USC § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. § 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. § 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. § 102(e)).

Art Unit: 1652

Claim 79 is rejected under 35 USC § 102(b) as being anticipated by Mitchinson et al., US 5,736,499, of record.

Applicant's arguments filed 12 December 2007 have been fully considered but they are not persuasive in view of this new ground of rejection wherein the non-elected subject matter that was previously presented in the canceled claim 48 and now presented in claim 80 is specifically excluded and wherein the claim limitation of 95% identity is specifically applied to the elected amylase of Group 4 having the amino acid sequence of SEQ ID NO:8, now represented in claims 79 and 82 but absent from claims 80, 81, 83, or 84. The multiple subject matters defined by claim 82 are free of the prior art and are rejected herein only under the second paragraph of 35 USC § 112. Mitchinson et al. disclose the amino acid sequence of the *B. amyloliquefaciens* amylase in their SEQ ID NO:36 which, as explained above in the rejection of claim 79 under 35 USC § 112, second paragraph, meets the ambiguous limitations of the claim. Mitchinson et al. also disclose an amylase amino acid sequence in their SEQ ID NO:34 that comprises, when aligned with the elected amino acid sequence of SEQ ID NO:8 herein, sixteen relative amino acid substitutions and shares 96.7% sequence identity with SEQ ID NO:8 herein, and further disclose that their amylases, together with other enzymes such as "endoglycosidases, proteases, lipases cellulases and other amylases", in detergent compositions, i.e., cleaning agents, according to the limitation of claim 79. See col. 4, lines 20-36, and the paragraphs spanning col. 9, line 57, through col., 10, line 29, lines 24-33, and page 81, lines 9-15, of the specification, and claims 1 and 22-25. The amylase of Mitchinson et al. meets structural limitations for an amylolytic protein in a cleaning agent of claim 79 where it (1) "comprises" an amino terminal segment wherein amino acid substitutions of V1L, T13M, A27S, E28A, H29Y, S31A, D32E, I33H, L47T, N52G, and Q66H occur relative to the sequence of SEQ ID NO:2 herein, (2) "comprises" a relative point of fusion at a position corresponding to position 76 in the amino acid sequence of SEQ ID NO:4 herein, (3) "comprises" a carboxyl terminal segment wherein the amino acid substitutions R132L, S308G, and A318S occur relative to the amino acid sequence of SEQ ID NO:4, and, (4) "comprises" many contiguous segments of the amino acid sequence of SEQ ID NO:4 bordered by, e.g., (i) the position 76 and any of positions 84, 99, 108, or 112, (ii) the position 142 and any of the positions 147, 149, 151, 153, 163, 174, 179, 185, 191, 198, 201, 207, 231, 234, 244, 256, 263, or 276, or (iii) position 429 and any of positions 431, 433, or 483, and the many included regions thereof.

Claim 79 is rejected under 35 USC § 102(b) as being anticipated by Bott et al., US 5,763,385, made of record herewith.

Bott et al. disclose an amylase amino acid sequence in their SEQ ID NO:2 that comprises, when aligned with the elected amino acid sequence of SEQ ID NO:8 herein, thirteen amino acid

Art Unit: 1652

substitutions and shares 97.4% amino acid sequence identity with the elected amino acid sequence of SEQ ID NO:8 herein. Bott et al. further disclose that their amylases incorporated, together with other enzymes such as "endoglycosidases, proteases, lipases cellulases and other amylases", in detergent compositions, i.e., cleaning agents, according to the limitation of claim 79. See col. 4, lines 6-38 and 48-51, and col. 12, lines 37-57. The amylase of Bott et al. meets structural limitations for an amylolytic protein in a cleaning agent of claim 79 where it (1) "comprises" an amino terminal segment wherein amino acid substitutions of V1L, T13M, A27S, E28A, H29Y, S31A, D32E, I33H, L47T, S50A, N52G, P56A, and Q66H occur relative to the sequence of SEQ ID NO:2 herein, (2) "comprises" a relative point of fusion at a position corresponding to position 76 in the amino acid sequence of SEQ ID NO:4 herein, (3) "comprises" a carboxyl terminal segment identical to that of SEQ ID NO:4 herein, from position 76 to the carboxyl terminus, wherein many contiguous segments of the amino acid sequence of SEQ ID NO:4 bordered by, e.g., the position 76 and any of positions 84, 99, 108, 112, 147, 149, 151, 153, 163, 174, 179, 185, 191, 198, 201, 207, 231, 234, 244, 256, 263, 276, 429, 431, 433, or 483, occur, as well as the many included regions thereof.

Claim 79 is rejected under 35 USC § 102(e) as being anticipated by Andersen et al., US 6,410,295, made of record herewith.

Andersen et al. disclose the amino acid sequence of the *B. amyloliquefaciens* amylase in their SEQ ID NO:6 which, as explained above in the rejection of claim 79 under 35 USC § 112, second paragraph, meets the ambiguous limitations of the claim. Andersen et al. also disclose an amylase amino acid sequence in their SEQ ID NO:2 that comprises, when aligned with the elected amino acid sequence of SEQ ID NO:8 herein, fourteen amino acid substitutions and shares 97.1% amino acid sequence identity with the elected amino acid sequence set forth in SEQ ID NO:8 herein. Andersen et al. further disclose that their amylases are incorporated in detergent compositions, i.e., cleaning agents, according to the limitation of claim 79. See col. 17, lines 59-63. The amylase of Andersen et al. meets structural limitations for an amylolytic protein in a cleaning agent of claim 79 where it (1) "comprises" an amino terminal segment wherein amino acid substitutions of L47T, S50A, N52G, P56A, and Q66H occur relative to the sequence of SEQ ID NO:2 herein, (2) "comprises" a relative point of fusion at a position that corresponds to position 76 in the amino acid sequence of SEQ ID NO:4 herein, (3) "comprises" a carboxyl terminal segment wherein amino acid substitutions of R132L, H154Y, A179T, N188F, I199F, A208V, Q262S, S308G, and A318S occur relative to the amino acid sequence of SEQ ID NO:4 herein, and (4) "comprises" many contiguous segments of the amino acid sequence of SEQ ID NO:4 bordered by, e.g., (i) the position 76 and any of positions 84, 99, 108, or 112, (ii)



Art Unit: 1652

the position 142 and any of positions 147, 149, 151, or 153, (iii) position 163 and position 174, (iv) the position 231 and any of positions 234, 244, 256, or 263, (v) the position 429, and any of positions 431, 433, or 483 of SEQ ID NO:4 herein, as well as several included regions thereof.

Claim 79 is rejected under 35 USC § 102(e) as being anticipated by Hatada et al., US 6,486,113, made of record herewith.

Hatada et al. disclose the amino acid sequence of the *B. amyloliquefaciens* amylase in their SEQ ID NO:6 which, as explained above in the rejection of claim 79 under 35 USC § 112, second paragraph, meets the ambiguous limitations of the claim. Hatada et al. also disclose an amylase amino acid sequence in their SEQ ID NO:8 comprising, when aligned with the elected amino acid sequence of SEQ ID NO:8 herein, thirteen amino acid substitutions and sharing 97.4% amino acid sequence identity with SEQ ID NO:8 herein, and disclose that it is incorporated in detergent compositions, which are cleaning agents, together with other enzymes, meeting limitations of claim 79. See col. 7, lines 28-60. The amylase of Hatada et al. meets structural limitations for an amylolytic protein in a cleaning agent of claim 79 where it (1) "comprises" an amino terminal segment wherein amino acid substitutions of V1L, T13M, A27S, E28A, H29Y, S31A, D32E, I33H, L47T, S50A, N52G, P56A, and Q66H occur relative to the sequence of SEQ ID NO:2 herein, (2) "comprises" a relative point of fusion at a position corresponding to position 76 in the amino acid sequence of SEQ ID NO:4 herein, (3) "comprises" a carboxyl terminal segment identical to that of SEQ ID NO:4 herein, from position 76 to the carboxyl terminus, wherein many contiguous segments of the amino acid sequence of SEQ ID NO:4 bordered by, e.g., the position 76 and any of positions 84, 99, 108, 112, 147, 149, 151, 153, 163, 174, 179, 185, 191, 198, 201, 207, 231, 234, 244, 256, 263, 276, 429, 431, 433, or 483, occur, as well as the many included regions thereof.

#### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 USC § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 79, 85-89 and 97 are rejected under 35 USC § 103(a) as being obvious over Callen et al., US 7,273,740, made of record herewith, in view of Mitchinson et al., of record.

Callen et al. teach an amylase amino acid sequence in their SEQ ID NO:8 comprising, when aligned with the elected amino acid sequence of SEQ ID NO:8 herein, fourteen amino acid substitutions and sharing 97.3% amino acid sequence identity with the elected amino acid

Art Unit: 1652

sequence set forth in SEQ ID NO:8 herein. Callen et al. also teach that amylases are used “as cleaning agents in detergent matrices”, i.e., cleaning agents, according to the limitation of claim 79. See, col. 1, lines 33-34. The amylase of Callen et al. meets structural limitations for an amylolytic protein in a cleaning agent of claim 79 where it (1) “comprises” an amino terminal segment wherein the amino acid substitutions V1L, T13M, A27S, E28A, H29Y, S31A, D32E, I33H, L47T, S50A, N52V, P56A, Q66H, occur relative to the sequence of SEQ ID NO:2 herein, (2) “comprises” a relative point of fusion at a position corresponding to position 76 in the amino acid sequence of SEQ ID NO:4 herein, (3) “comprises” a carboxyl terminal segment wherein the amino acid substitution S308G occurs relative to the amino acid sequence of SEQ ID NO:4, and, (4) “comprises” many contiguous segments of the amino acid sequence of SEQ ID NO:4 bordered by, e.g., (i) the position 76 and any of positions 84, 99, 108, 112, 142, 147, 149, 151, 153, 163, 174, 179, 185, 191, 198, 201, 207, 231, 234, 244, 256, 263, or 276 and (ii) the position 429 and any of positions 431, 433, or 483, as well as the many included thereof. The amylase of Callen et al. structurally anticipates claims that include the elected amylase herein. The teachings of Mitchinson et al., discussed above, are taken as before. It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the amylase of SEQ ID NO:8 of Callen et al. in preparing a detergent composition of Mitchinson et al., which is a cleaning agent, because Mitchinson et al. teach that other amylases are advantageously incorporated in such compositions and because such an artisan would have readily appreciated that the amylase of Callen et al. was appropriate for inclusion in such a composition where Callen et al. themselves teach that amylases may be used “as cleaning agents in detergent matrices”.

Claims 85-97 are rejected under 35 U.S.C. § 103(a) as being unpatentable over any of Mitchinson et al., Bott et al., Hatada et al., Callen et al., and Andersen et al. as applied to claim 79 above and further in view of Sadlowski et al., US 6,656,899, made of record herewith.

The teachings of Mitchinson et al., Bott et al., Hatada et al., Callen et al., and Andersen et al. discussed above are taken as before. Sadlowski et al. teach the preparation of amylase-comprising liquid detergent compositions, i.e., cleaning agents, having both liquid and solid phases that comprise different enzymes, including one or more proteases, one or more amylases, one or more lipases, one or more cellulases, and one or more  $\beta$ -glucanases, wherein any enzyme may be present in a weight percentage range from “about 0.01% to about 5%”, or at a range from “about 0.01 to about 3mg . . . per gram of composition” and that further comprises components – hydrotropes e.g., alkylethoxy sulfates – and a system of mechanical stabilization – the formation of solid prills – that stabilize enzymatic activity, such as amylolytic activity of amylases, or increase the contribution of enzymes, such as amylases, to the washing

Art Unit: 1652

or cleaning performance of the agent. See col. 17, line 46, through col. 20, line 14. Sadlowski et al. additionally teach the preparation of further solid components that are "cleaning agents", just as enzyme prills are "cleaning agents", included in their compositions that are "cleaning agents", in the form of granules that comprises two solid phases, the outer encapsulating the inner, wherein one of the two solid phases of the granule is a starch that is susceptible to the amylolytic activity of an amylase permitting its decomposition upon dilution of the detergent composition in an aqueous wash solution in a method of, e.g., cleaning textiles, where the granules, "filler particles" are no longer needed in the aqueous environment of the wash solution. See cols. 3-17, and particularly col. 6, lines 42-52, and col. 7, lines 43-57. It would have been obvious to one of ordinary skill in the art at the time the invention was made to improve the washing or cleaning performance of a cleaning agent taught Sadlowski et al., within the ranges of representation for any enzyme therein taught by Sadlowski et al. which are within ranges recited in claim 85, where Sadlowski et al. teach that multiple forms any particular category of enzyme such as amylases may be incorporated, by adding an amylase taught by any of Mitchinson et al., Bott et al., Hatada et al., Callen et al., and Andersen et al., meeting the limitations of claims 85-93 and 97. This is because Sadlowski et al. teach that the starch-degrading activity of amylases is advantageous for the proper utilization of their two-solid phase granules wherein one phase comprises starch, and because such an artisan would have readily appreciated that the amylases taught by any of Mitchinson et al., Bott et al., Hatada et al., Callen et al., and Andersen et al. would provide the necessary advantage. It would have also obvious as well to such an artisan at that time to practice a method for cleaning, at least, textiles of claims 94-96 herein by cleaning the textile in an aqueous wash solution by adding a cleaning agent taught by Sadlowski et al. comprising an amylase taught by any of Mitchinson et al., Bott et al., Hatada et al., Callen et al., and Andersen et al. wherein dilution of the cleaning agent in the wash solution would inherently result in a concentration of amylase therein within the range indicate in claim 95 and the cleaning agent of Sadlowski et al. comprises multiple phases. This is because Sadlowski et al. teach that such is the purpose of their cleaning agent and because such an artisan would have readily appreciated that the amylases taught by any of Mitchinson et al., Bott et al., Hatada et al., Callen et al., and Andersen et al. would serve advantageously in such a method when provided in the cleaning composition of Sadlowski et al.

#### *Conclusion*

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

Art Unit: 1652

system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William W. Moore whose telephone number is 571.272.0933 and whose FAX number is 571.273.0933. The examiner can normally be reached Monday through Friday between 9:00AM and 5:30PM EST. If attempts to reach the examiner by telephone are unsuccessful, the examiner's Supervisory Primary Examiner, Dr. Kathleen Kerr Bragdon, can be reached at 571.272.0931. The official FAX number for all communications for the organization where this application or proceeding is assigned is 571.273.8300. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571.272.1600.

/Nashaat T. Nashed/  
Nashaat T. Nashed, Ph. D.  
Supervisory Primary Examiner  
Art Unit 1652

/William Moore/  
3 March 2008

## APPENDIX: PREVIOUSLY PROPOSED AMENDMENT

The earlier-proposed examiner's amendment would have cancelled claims 82-84 and amended claims 79-81 and 97 thus:

79. (Amended) A cleaning agent comprising a chimeric amylolytic protein comprising an amino acid sequence that is at least 98% 95% identical to the an amino acid sequence set forth in SEQ ID NO:8 wherein the *Bacillus licheniformis*  $\alpha$ -amylase amino acid sequence from position 78 through position 481 of SEQ ID NO:2 is fused to the *Bacillus amyloliquefaciens*  $\alpha$ -amylase amino acid sequence from position 1 through position 76 in SEQ ID NO:4 ~~consisting of one or more segments of contiguous amino acids of the *Bacillus amyloliquefaciens*  $\alpha$ -amylase set forth in SEQ ID NO:4 fused to one or more segments of contiguous amino acids of the *Bacillus licheniformis*  $\alpha$ -amylase set forth in SEQ ID NO:2, wherein each terminus of the segments of contiguous amino acids of the *Bacillus amyloliquefaciens*  $\alpha$ -amylase is, independently, located at position 1, 17, 19, 34, 76, 84, 99, 108, 112, 142, 147, 149, 151, 153, 163, 174, 179, 185, 191, 198, 201, 207, 231, 234, 244, 256, 263, 276, 429, 431, 433, or 483 of SEQ ID NO:4 and each terminus of the segments of contiguous amino acids of the *Bacillus licheniformis*  $\alpha$ -amylase is, independently, a position in SEQ ID NO:2 that is homologous to one of the termini of the segments of contiguous amino acids of the *Bacillus amyloliquefaciens*  $\alpha$ -amylase in SEQ ID NO:4.~~
80. (Amended) The cleaning agent of claim 79, wherein the chimeric amylolytic protein is at least 99% identical to the amino acid sequence set forth in SEQ ID NO:8 ~~AL17, AL108, AL142, AL147, AL149, AL151, AL163, AL174, AL179, AL185, AL191, AL198, AL207, AL231, AL234, AL244, AL263, AL276, AL431, ALA17-151, ALA76-151, ALA99-429, ALA112-151, ALA112-201, LA19 or LA431.~~
81. (Amended) The cleaning agent of claim 79, wherein the chimeric amylolytic protein is identical to the amino acid sequence set forth in SEQ ID NO:6, SEQ ID NO:8, or SEQ ID NO:10 ~~AL34 (SEQ ID No. 6), AL256 (SEQ ID No. 12), ALA34-84 (SEQ ID No. 14) or LAL19-153 (SEQ ID No. 18).~~
97. (Amended) A method for improving the washing or cleaning performance of a cleaning agent comprising adding to the agent a chimeric amylolytic protein comprising an amino acid sequence that is at least 98% 95% identical to the an amino acid sequence set forth in SEQ ID NO:8 wherein the *Bacillus licheniformis*  $\alpha$ -amylase amino acid sequence from position 78 through position 481 of SEQ ID NO:2 is fused to the *Bacillus amyloliquefaciens*

Art Unit: 1652

~~$\alpha$ -amylase amino acid sequence from position 1 through position 76 in SEQ ID NO:4 consisting of one or more segments of contiguous amino acids of the *Bacillus amyloliquefaciens*  $\alpha$ -amylase set forth in SEQ ID NO:4 fused to one or more segments of contiguous amino acids of the *Bacillus licheniformis*  $\alpha$ -amylase set forth in SEQ ID NO:2, wherein each terminus of the segments of contiguous amino acids of the *Bacillus amyloliquefaciens*  $\alpha$ -amylase is, independently, located at position 1, 17, 19, 34, 76, 84, 99, 108, 112, 142, 147, 149, 151, 153, 163, 174, 179, 185, 191, 198, 201, 207, 231, 234, 244, 256, 263, 276, 429, 431, 433, or 483 of SEQ ID NO:4 and each terminus of the segments of contiguous amino acids of the *Bacillus licheniformis*  $\alpha$ -amylase is, independently, a position in SEQ ID NO:2 that is homologous to one of the termini of the segments of contiguous amino acids of the *Bacillus amyloliquefaciens*  $\alpha$ -amylase in SEQ ID NO:4.~~

The earlier-proposed amendment had removed non-elected subject matters from claims 79 and 80 but had included the closely-related amylases of SEQ IDs NOs:6 and 10 in claim 81 because both fall within the scope of the subject matter of claim 79 as amended above and, like SEQ ID NO:8 herein avoid the disclosures of

- the 96.9% identical amylase amino acid sequence of SEQ ID NO:34 of US 5,736,499,
- the 97.4% identical amylase amino acid sequence of SEQ ID NO:2 of US 5,763,385,
- the 97.1% identical amylase amino acid sequence of SEQ ID NO:2 of US 6,410,295,
- the 97.4% identical amylase amino acid sequence of SEQ ID NO:8 of US 6,486,113, and
- the 97.3% identical amylase amino acid sequence of SEQ ID NO:8 of US 7,273,740.